

THE LEISURE HOUR.

BEHOLD IN THESE WHAT LEISURE HOURS DEMAND,
AMUSEMENT AND TRUE KNOWLEDGE HAND IN HAND.—*Courtesy.*



MR. DARLING DROPS IN TO TEA.

MISS PILKINGTON.

CHAPTER XVII.

MRS. PILKINGTON laughed quietly and heartily when she and Patty had got out to the hall. "Shearer," she said to the donkey-chair-man who waited at the porch, "Miss Fanny Brookes is going out in your chair for an hour's drive, and be sure," she added, nodding her head impressively, "to take

her in the direction where she will have a good breeze of wind in her face; it's good for the nerves, Shearer."

"Yes, ma'am; I can take her up Drelton way; there's always a pretty stiff wind blowing from the hill there, ma'am."

"Very true, Shearer. Mind the children tomorrow at ten. Come away, Patty." And leaning on her niece's arm, the old lady went leisurely homewards. They were near their own door, when a

lady, leading a small and very fat spaniel by a ribbon, came hurrying to meet them.

"It's Mrs. Elwyn, Colonel Elwyn's wife," said Mrs. Pilkington to her niece before she reached them. "How do you do, Mrs. Elwyn? this is my niece, Miss Pilkington."

"How do you do, Mrs. Pilkington? How do you do, Miss Pilkington? Glad to see you—hope you will like Hilcum-Seabeach." Then, in an excited tone, "Oh, Mrs. Pilkington, have you heard the news? Clara Mellis is going to be married to Mr. James Evans!"

"I am glad to hear it," said Mrs. Pilkington, with what Mrs. Elwyn evidently felt was disappointing quietness; "Clara will make him a good wife."

"But isn't it shocking for her? You know he is almost blind, and they say he will be blind altogether soon."

"Then he has the more need of a sensible wife to take care of him," said Mrs. Pilkington. "I am heartily glad that such a piece of good fortune has come in Clara's way after toiling all her best days to help her mother with that school, especially as her sisters are now able to take her place. It's independence for her; and, depend upon it, one-half of the unmarried women in Hilcum-Seabeach will be envious of her."

"Not my girls, I assure you, Mrs. Pilkington," said Mrs. Elwyn, with spirit.

"Well, your girls don't need to work for a living, and they are away in London half their time. But it's true men are scarce here, and when an article's rare we know it rises in value in the market."

"But only think of having to lead one's husband about on the street."

"Better lead a husband than lead a dog, as you do, Mrs. Elwyn," coolly answered the old lady.

"Oh, that is so like you, Mrs. Pilkington," laughed the self-satisfied but good-natured woman. "But I suppose you Scotch people don't like dogs—isn't that it, Pippie?"

"Not like dogs!" said Mrs. Pilkington, disdainfully. "A Scotchwoman that's a Highlandwoman besides, not like dogs! Mrs. Elwyn, there are dogs and dogs. The dogs that I was accustomed to in the Highlands—and we had plenty of them—were a different sort, truly, from that little wheezing brute of yours, that will smother in its own fat some day. I'll warrant it eats more butcher's meat in a day than poor Shearer, my donkey-chairman, gets in a week."

"Oh, no, no, Mrs. Pilkington!"

"I say it does, and that if I had the opportunity I would turn a wash-tub over the creature, and keep it under for a week without bite or sup, and when it came out it would be as slim as a weasel and thankful for a good mess of broth and bread or porridge and milk, the little pampered beast!"

"Oh, you cruel woman! I shall think the Scotch savages after this," said the laughing lady. "Come away, Pippie, poor Pippie! We shan't give her an opportunity, shall we? Good-bye, Mrs. Pilkington, you are a privileged person, you know, and can say what you like; and good-bye, Miss Pilkington. I shall do myself the pleasure of calling on you and your niece one of these days, Mrs. Pilkington." And Mrs. Elwyn, a portly, handsomely dressed woman, went on her way, the vilified Pippie, unconscious of contempt, waddling by her side.

"Humph!" said Mrs. Pilkington, as she applied a check-key, which she carried in her pocket to save

PHEME trouble, first to the gate and then to the house-door. "I should say, Patty, that you have seen a good specimen of Hilcum-Seabeach society to-day. We are very like the old Athenians, my dear, that spent their time in nothing else but either to tell or hear some new thing, and the pity is that here there is seldom anything happens worth the learning. I don't say that about Clara Mellis's marriage, however. We're not a reading set: if we're anything, we're a talking and a religious one, after a sort. For all that satirical rascal, Sidney Smith, says to the contrary, I've heard more wit and cleverness in the course of one day in Edinburgh than you'll hear in a month—a month—six months!—say a year at once!—in such an English town as Hilcum-Seabeach. To be sure, London is the great whirlpool that sucks in all the big fishes round about it, and not a few of our Scotch ones besides now. But Edinburgh was Edinburgh in my young days! I wish, though, I had heard this news of Clara Mellis before calling on the Brookses, it is just the kind of thing to interest them; and the marriage preparations, and the visits that must be made before and after the event, will keep the poor souls cheerful and lively for months; but I am sorry they should miss a day of it. But they won't," she said, glancing back; "there's the chair crossing the end of the terrace; Miss Fanny is making Shearer take her down town instead of round the hill; and there's Mrs. Elwyn bearing down upon her and Miss Nancy. It's all right; but I am glad I am out of the way. Get into the house, Patty, and give yourself a tidy before dinner, for as all of us except the rector and the retired military dine early, the usual hour for visiting is late in the afternoon. Simpkins is as good as his word; there's the parcel on the lobby table. Take it to your room, Patty, and tear a skirt off, so that you can begin it after dinner; it's as suitable drawing-room work as my stocking, and there's no time to lose."

When they had discussed the excellent roast chicken and sage pudding which PHEME had provided for their dinner, the aunt and niece established themselves for the rest of the day in the drawing-room, each with her work, Patty in the pleasant bow window, and Mrs. Pilkington, who was always chilly, by the fireside. The latter was not in a talking mood, and Patty was glad to be silent; she had been so much accustomed to long intervals of solitude, that she felt it a relief to be allowed to think, undisturbed by conversation. Her life was so suddenly changed; she wanted to consider it fully that she might feel truly grateful. At present she was so confused and bewildered by her new position and her aunt's singularities, that she feared she was not so thankful as she ought to be, especially to the good God who had guided her to this refuge and opened her aunt's heart to her. How different it was to sit in this lovely bow window, from which a broad expanse of ocean was visible, to occupying her old place in Poplar Road, with its miserable outlook! And how different to be working for a charitable purpose instead of to provide food for herself! What a nice dinner she had just had! It was a gala dinner to her, accustomed to a single and not always well-cooked chop, and latterly denying herself even it; but it was evidently the usual fare of Mrs. Pilkington's table. How could she be thankful enough and do enough for her kind, though strange, aunt in return?

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to save her all trouble," thought Patty. "I'm afraid there is little I can do, however, and I am so dull and ignorant as a companion. I could do the housekeeping, but with such a servant as PHEME that is not needed."

As reflections such as these were passing through Patty's mind, the drawing-room door was opened by PHEME, her white apron and lace cap, which she had discarded after dinner till her things were cleaned up, having been hastily assumed to answer the door-bell.

"Ah! it's you, Mr. Breckenridge, is it?" said Mrs. Pilkington, graciously, as a tall, good-looking, elderly man, with a decidedly clerical air, entered the room; "I knew it was either you or the curate. That's my niece, Patty Pilkington, in the window there. Patty, this is our rector."

"Did not know you had a niece, Mrs. Pilkington," said the rector, as he crossed the room to shake hands with Patty, who rose, with great respect, to meet him, for Patty had seldom come in contact with clergymen, and held their office in deep reverence.

"Well, if I haven't, my husband had, which is the same thing, I suppose, for man and wife's one flesh, as you are always telling folks when you read the marriage service over them."

"Never heard before that your husband had a niece, Mrs. Pilkington," said the rector.

"Well, if you never heard it before you've heard it now," replied the old lady. "And as to Patty, she's not a bad article to be an Englishwoman. Well, is Nathaniel not back yet?"

"Nathaniel, as you call him," said the rector, "will not be back till to-morrow afternoon; I had a note from him this morning."

"What sets people dying at such inconvenient times, I wonder," said Mrs. Pilkington, impatiently, shocking simple-minded Patty not a little by the remark. "Frank Darling has been so long ill that he might just have waited a little longer. There's old Mrs. Nutt has fallen down and dislocated her arm, and I wanted the curate to go and see her."

"I saw her this forenoon," said the rector, "and she is doing well."

"Oh, you did, did you?" said Mrs. Pilkington, briskly; "that's just what I wished to find out. But the curate does best for poor folks; they stand too much in awe of your Oxford learning and dignity. Look how Patty is wondering at the liberties I take with the clergy! but one may like the kirk well enough, Patty, and yet not ride on the rigging of it; though, I dare say, you don't know what that means."

"No, aunt," said Patty, humbly.

"Never mind, you'll improve in time. You're sure the curate will be back to-morrow?"

"He says so, at least," replied the clergyman, who had listened to the criticism upon his learning with an amused expression of face.

"The place doesn't seem the same when he is out of it," said Mrs. Pilkington. "He was sure to drop in to tea once or twice a week; I thought he might come to-night."

"You might invite me to supply his place," said Mr. Breckenridge.

"Very likely, when you haven't had your dinner," said Mrs. Pilkington. "You'll be taking your soup when I am at my first cup. Six o'clock's my tea-hour, as you know; and I wouldn't wait till eight for my tea, though you were the bishop instead of the rector."

"That's your Presbyterian lawlessness and want of proper reverence for constituted authorities," said the rector, laughing. "Miss Pilkington, have you ever been in Scotland?"

"Not she," replied the old lady for her. "I don't believe Patty ever saw a Scotch person, to her knowledge, before she came here."

"Oh, yes, I had seen one," said truthful Patty.

"What kind of woman was she?" asked her aunt.

"She was our washerwoman at one time," said Patty, "and she was a very honest person; but I am afraid"—and then suddenly recollecting her aunt's strong nationality, she stopped and coloured.

"You are afraid she was what?" demanded Mrs. Pilkington.

"I am afraid she sometimes got tipsy, aunt," said Patty in a low voice, and feeling very frightened.

"Well, Patty," said her aunt, coolly, "if ever you see the second Scotchwoman you have met with in that state, you can let his reverence here know; in my country, a person's name would be struck off the roll of members for such an offence."

"Your clergymen's time must be a good deal occupied with such work, then, if all tales be true of the habits in Scotland," said the rector, gravely, but with an arch twinkle in his eyes, for he relished stirring up the old Scotchwoman to ride her hobbies.

"Stuff and nonsense!" retorted Mrs. Pilkington, warmly. "We're a shockingly drunken nation, it is certain, and a disgrace to Christendom, especially as we make such a religious profession; but for an Englishman to taunt the Scotch with it, it is like the pan calling the kettle black. The only difference between them is in the nature of the liquor they drink. The Scotchman fires his brain, which needs no such stimulus, with bad whisky; and when he gets out to the street, if he is of a quarrelsome disposition, he makes a row, and fights, and the police have to interfere, and the case is reported in the papers as one of drunkenness and disorderly conduct. Now your English working man sits and boozes ale in the public-house till his brains, which are dull enough by nature, become still more dull, and then he reels away home and tumbles into his bed to sleep his drink off, and the public never hear a word of the matter. I am not speaking of the regular riff-raff of either people, you understand, but of the working classes, as the truest representatives of nationality. And that's the real state of the case, Mr. Breckenridge, and I dare you to deny it."

"Well, well! there's probably some truth in what you say," said the rector. "But you're a troublesome set of people, you Scotch; you are always in some turmoil or other. Look at your different churches, as they call them; we cannot comprehend in England what they are fighting about, for, after all, they are the same in doctrine and church government."

"And whose fault is it if you can't comprehend?" said the undaunted old Scotchwoman. "How is it that there's not an intelligent man or woman in Scotland—some with no higher education than being able to read or write—but is well up in all the ecclesiastical disputes of your church—and their name's legion in these days—while the history and heroic struggles of our noble Presbyterian one are utterly unknown, not merely by artisans and ploughmen, and domestic servants here, but by people of

"I will," said the rector, and took his leave.

"He's a good man, Patty," said her aunt, when the clergyman had gone. "Still, he's a greater scholar than a minister. But he preaches clever sermons, and gives his money—of which he has plenty—freely; and you can't have everything. And then he has a curate that supplies all deficiencies, and labours among the poor ignorant folks—and they're an ignorant set, the common people in England—like a human steam-engine. His heart's in his work, you see. Ah! you will be sure to like Nathaniel when you see him."

"That is an unusual name," said Patty.

"It's not his real name, child; I call him so because it expresses his character. His name is Leonard Darling."

Patty ate very little at tea-time, remembering what would be expected of her at supper. This evening she contrived to eat the porridge with so little appearance of reluctance, that her aunt complimented her upon it.

CHAPTER XVIII.

"PHEME," said Mrs. Pilkington to her servant, the second day after the rector's visit, "be sure you give us plenty of good cream and strong tea to-night, for I shouldn't wonder to see Mr. Darling drop in."

"Very well, mem," said PHEME, acquiescingly; "I ken well enough that Mr. Darling is fond of them. I dinna think I ever saw a gentleman enjoy his tea like him, and Mrs. Davis, his landledly, says that he drinks milk like a one-year old babby that hasna begun yet to eat."

"That's because he never takes wine and spirits, or even malt liquor, PHEME," said Mrs. Pilkington.

"Your total abstinence is sure to be a great tea-drinker, and milk's a very nourishing thing if they wouldn't adulterate it; you must go to the Highlands now, if you want pure milk."

"Eh, mem, that's true," said PHEME, as she was leaving the room after making up the fire; "the milk here's no more to be compared to the milk we got from my father's coo when I was a lassie than that bit driddling burn outside the town that some folk call a river is to the fresh springs o' water in the bonnie Cloich braes." And she shook her head impressively as she withdrew to her kitchen.

"I don't believe," said Mrs. Pilkington, laughing, "that PHEME thinks there's a single eatable or drinkable here at all equal to what she got in Scotland; and even as to the way of cutting joints of meat, she and the butcher have a perpetual war. But it's true enough what she said about the milk, which they water in all the towns now. All he drinks of it won't fatten the curate, I'm afraid. I wish, labouring as he does, that he could see his way to take a glass of good sherry, but he won't hear of it."

"Is it against his principles?" said Patty.

"Not that, my dear; he surely cannot think it unscriptural to drink wine in moderation, but he denies himself that he may set an example to the poor here, to whom drink is a great temptation, as it is in all places. Example goes farther than precept in restraining them, or rather the example gives weight to the precept, and therefore he has become a total abstainer. But I have known him carry many a bottle of wine in his pocket to poor sick folk who needed it but could not afford to purchase it."

Mrs. Pilkington did not mention to Patty that most of these bottles of wine were provided by herself; that was a secret between the curate and her.

"He must be a good man," said Patty, earnestly.

"You're right there," said her aunt; "but you'll never hear him make a flourish of trumpets about his own goodness like the Pharisees in the Scriptures; you have to find it out for yourself, and from what the poor say of him. I know of his carrying pitchers of water up staircases for old women who had nobody to do it for them; and yet Leonard Darling is a true gentleman. I never knew him do a mean, ungenerous thing. Ah! if any one wants a character of Leonard Darling let him go to the garrets of Hilcum-Seabeach for it."

Mr. Darling, curate to the wealthy and learned rector of Hilcum-Seabeach, was the elder son of a clergyman who had held a poor living among the fens of Lincolnshire. He possessed a moderate independence in addition; and by practising the strictest economy he and his wife had been enabled to give Leonard a college education; and the father had the satisfaction of seeing him ordained to holy orders and settled as curate in the same county before his own death. That occurred about a year afterwards. The mother and younger son, a confirmed invalid, removed from the vicarage to a cottage in the village in which the father had so long laboured, where they were surrounded by attached, though mostly humble, friends. The small private income of the family sufficed to maintain them there. There they had resided for some years. But during the last six months the long chronic illness of poor Frank Darling had increased in severity, and a fortnight before Patty's arrival at Hilcum-Seabeach the elder brother, who had lost his first curacy through the death of the incumbent, and had then been appointed to his present one, had been summoned to attend his death-bed. He had now returned some days after the funeral, leaving his widowed mother in the care of his only sister, who was married to a clergyman in the same district of country, and who had felt compelled to quit her young family for a brief period for this purpose. And it had been settled—to Leonard's great satisfaction, who decided that to remove his mother from the midst of old friends to live among strangers at Hilcum-Seabeach was undesirable on her account—that henceforward her home should be with her son-in-law and daughter, paying them a board for her maintenance.

Some time before six o'clock, Mrs. Pilkington's tea-hour, Mr. Darling did drop in as she had prognosticated. He had arrived the previous evening, and the rector, on whom he waited shortly after his return to report himself, had not failed to deliver her message. And the curate, who had long come to regard Mrs. Pilkington's lively society and tempting tea-table as his greatest occasional rest and enjoyment after a laborious day, willingly availed himself of her desire to see him. She received him with a warm welcome, and only refrained from expressing in her usual forcible style her dissatisfaction with his late absence by timely remembering the cause of it, suggested by the deep mourning of his dress.

The curate was tall and thin in person, and somewhat awkward and ungainly in manner and bearing. He was probably about thirty-five years of age; his complexion was unusually fair for a man; his fine and very straight hair was so light as almost to be flaxen in its colour, and he cultivated neither

beard nor whiskers, presenting continually a closely-shaven expanse of countenance above his white neckcloth. Not that that countenance was remarkable for breadth, being rather of an oval and refined type in contour, but that every feature, owing to this, was more unshaded and open to inspection than is the usual case with the male visage in these days. As the curate had no special proclivities, some people were of opinion that he shaved off his whiskers because of their red tinge. It might be so, for we are all subject to our little weaknesses, and this one may have been his. This habit of his brought out, perhaps, more strikingly the peculiar expression of his face, which was mild, gentle, and reflective. He did not look a man of much talent or force of character, certainly, but a man of large, kindly, almost feminine sympathies, and of a patient, simple, earnest, self-sacrificing nature, he did look. Notwithstanding this, he would have been reckoned decidedly plain but for the charm of the calm blue eyes that met yours so honestly and trustingly, and which were enough to redeem any countenance. He was shy and silent with strangers, but open-hearted and unreserved when alone with friends. Humble and diffident of himself he was well known to be, and always willing to take the lowest place. All who knew him liked and believed in Leonard Darling, though few were able to appreciate him as Mrs. Pilkington did, who, in calling him Nathaniel—which she only did, however, when speaking of him to the rector—fully expressed her sense of the genuine simplicity and sterling worth of his character.

Mr. Darling seated himself in the empty chair opposite Mrs. Pilkington's, which seemed, by the way he took possession of it, to be his customary place when visiting her. Patty's favourite seat was in the bow window, for her eyes could never see enough of that glorious far-stretching sea, especially when sunset hues of gold, amber, and crimson, and sometimes a delicious soft shade of green melting into the blue, were reflected from the sky upon it as in a mirror. An occasional glance at it did not hinder her work; it rather furthered it by refreshing and stimulating her spirits. She remained, therefore, quietly in the background, not joining in the conversation between the curate and her aunt, which, indeed, referred principally to matters of which she had no knowledge. Not much was said about the event which had occasioned his absence from Hilcum-Seabeach.

"And so poor Frank is gone," was almost all Mrs. Pilkington had said on the subject after he had seated himself, for she rightly guessed she would do him a service by diverting his mind from dwelling on a theme which must have been the prevailing one in it for some time back, and which had impressed a stamp of deeper gravity upon his always thoughtful countenance.

"Yes, he is gone, poor fellow," replied the curate in the low, quiet tones in which he usually conversed; "and but for my mother, who feels the bereavement greatly, I could almost say I am glad of it. He was never free from suffering, and we have every reason to hope that he has exchanged this life for a better. I never saw a more humble, patient, devoted Christian."

"And your mother feels it severely," said Mrs. Pilkington, with evident sympathy, notwithstanding her apparent want of it when she spoke of the death to the rector.

"She has nursed him constantly for the last fifteen years," said the curate, looking wistfully at her, "and she feels now as if her life-work was finished. But she is to reside henceforward with Tom and Ada, and the society of the children will do her good, I have no doubt."

And then they began to talk on Hilcum-Seabeach subjects—of the widow who had broken her arm, and of Shearer's children, whom he had wanted to attend his Sunday-school.

"You will have them this Sunday," said Mrs. Pilkington. "Patty there is busy with their frocks."

The curate turned round to Patty, and smiled benignly. He had bowed shyly on being introduced to her, but without speaking; now that he had found she was a fellow-labourer his shyness was gone.

"Patty likes work," said the old lady, complacently; "when you are in need of help you had better come to her."

"Perhaps, then, your niece will not object to take a class in the school; we are greatly in need of teachers," said the curate, brightening up, and fixing the calm blue eyes appealingly on Patty.

Patty coloured and hesitated. She had never taught in a Sunday-school, and was doubtful of her ability to do so; besides, she was here only on probation, and might have shortly to leave. But her aunt promptly decided the question for her, as if Patty's continuance at Hilcum-Seabeach was a thing already determined in her mind.

"Of course she will take a class, as Miss Mellis is going to be married, and you will lose your right hand woman then," said she. "You had better put Shearer's children into it, for they are very ignorant, ill-trained little things, and Patty is sure to be patient with them, which is more than I could be, I know."

"It is very necessary with children," said the curate; "but," he added, with a grateful smile to Mrs. Pilkington, "you have always been patient with me, which is a greater demand upon you."

"Stuff and nonsense!" exclaimed Mrs. Pilkington. "But here's PHEME with the tea-urn. Patty, I know the curate is wearying for his tea. Mr. Darling, what kind of tea does that landlady of yours give you?"

"It is not so good as yours, Mrs. Pilkington," said the curate, as he took his place at the tea-table, which had been covered by PHEME with many good things, including plenty of cream in an antique silver jug.

"Do you keep the key of the tea-chest?" asked Mrs. Pilkington.

"No; I think it generally stands in the lock," said the simple-minded curate.

"Humph! and how long does a pound of tea last you?" said the old lady, with a twinkle in her eye. "I know you take coffee to breakfast."

"I think there is always a pound in the grocer's bill which Mrs. Davis brings to me every Monday," said the curate, pondering the matter.

"What!" cried Mrs. Pilkington, indignantly, while Patty looked her astonishment at the quantity. She knew from experience how much one person should consume in a week, even such a tea-drinker as Mr. Darling, who, besides, drank it only in the evening. "What!" repeated Mrs. Pilkington; "a whole pound in a week, and you only using it once a day! Your landlady is a regular cheat, Mr. Darling."

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"Oh, surely not, Mrs. Pilkington!" said the curate, looking shocked and distressed; "she must be an honest woman; I am certain she would not wrong me. And you see I drink a great deal of tea—more than most people. I am afraid I often take four cups, Mrs. Pilkington."

"How many spoonfuls do you infuse?" demanded his unmoved friend.

"Well, Mrs. Davis generally saves me that trouble, Mrs. Pilkington," said the curate, with some hesitation, as if ashamed to confess his remissness. "I am often busy, and, indeed, I believe I have always been in the habit of allowing her to officiate in this way—is it wrong, do you think?"

"Wrong for your own purse, Mr. Darling," said the old lady. "Pheme would make half the quantity serve you, and yet your tea would be as good as that you are drinking—your mother would tell you the same thing. I hope your steaks and chops are not ordered with the same liberality. I never did like that woman; but it is so difficult to get lodgings to suit one like you; most of those here are so large, and hold so many people in summer—people with noisy, screaming children, too. I'm sure if ever a man needed a wife, you do."

The curate coloured at this assertion, but shook his head with a smile.

"My curacy must be my wife," he said; "at least, I can afford no other at present. But if you think I ought, though I fear I shall hurt Mrs. Davis's feelings by the change, I shall keep the key of the chest, and give out the tea myself after this. Perhaps it is not judicious to expose Mrs. Davis to temptation—not that I think she would be guilty of dishonesty," he added, gravely.

"No more than the good laird of Belnaghie, who

never took more from a poor man than all he had," said the worldly wise Mrs. Pilkington, quoting one of her many proverbs, and then clinching the matter with a second. "Lock the door that you may keep your neighbours honest, Mr. Darling. By all means keep the key of your tea-chest, and never mind about your landlady's feelings—she has none for you, the hussy. Three teaspoonfuls will make four good cups of tea if you warm the teapot first, and infuse with boiling water—it depends upon that. Make them bring the kettle to your own room, do you hear! I have an extra cosy somewhere that I can give you—it will go into your great-coat pocket, I dare say. Patty, mind me to give him the cosy before he leaves; I think you'll find it on a shelf in that cabinet."

"It's a pity that that poor man hasn't a wife to take care of him, and keep him from being imposed on," said Mrs. Pilkington to Patty after the curate had left them, the cosy safe in his pocket. "They say there's a woman the exact counterpart of every man, with qualities that dovetail into his, and make up for his deficiencies; but only they seldom discover their missing half. I have an idea that Leonard Darling's counterpart is at Hileum-Seabeach, but neither may find that out; and then, as he says, he is too poor to be able to marry."

"She must be an excellent person if she resembles Mr. Darling," said Patty, who had been greatly edified by the curate's conversation during the two hours he remained with them after tea.

"She's pretty well that way, I think, Patty," said her aunt, glancing slyly over her spectacles at her unconscious niece. "I won't tell you her name, for, perhaps, it would make mischief; it's not safe wading in strange waters."

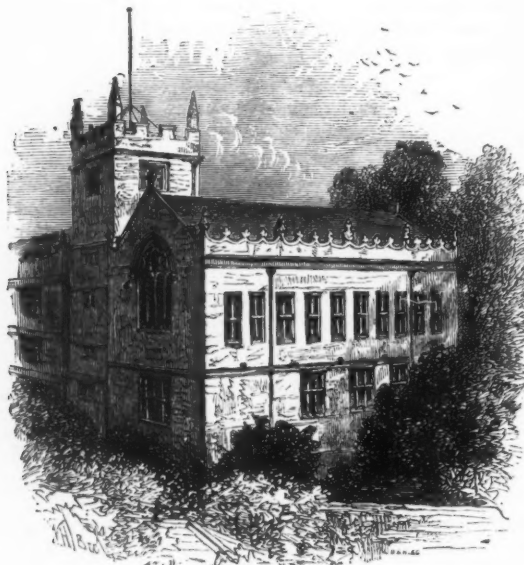
SHREWSBURY SCHOOL.

SOME three centuries ago, when the chief cities of the shires were relatively of far more consequence than they now are, Shrewsbury held an established position among the provincial capitals of England. Besides being the centre of an extensive and fertile district, it was the place where the Court of the Marches of Wales was held, and from a military point of view was the gate of the northern part of the Principality. In the language of the gentry many miles round the Wrekin, to go to Shrewsbury was to go to London, writes Lord Macaulay; and in point of fact, the capital of the county of Salop was one of the most important and prosperous towns of the kingdom. Like similar places of note in the provinces, Shrewsbury could boast an abbey, with churches annexed, which were ministered by Benedictine monks, who, in accordance with the prevailing custom of the age, had established in connection with these churches a school for the instruction of youth, the sons of the burgesses. At the dissolution of the monasteries, the town, owing, probably, to its being too remotely placed from the capital at once to engage the sympathies or active attention of King Henry, was left for some time without either properly appointed clergy or a school. The first were provided in due course under the new order of things coeval with the Reformation; but it was not till Edward VI ascended the throne that

Shrewsbury was enabled to replace the facilities for education which had existed there under the beneficent sway of the Benedictine monks of the Colleges of the Blessed Mary and St. Chad. In the early part of Edward's reign a deputation of the principal inhabitants set out for London to represent to the king the total want of some public institution for the instruction of the youth of the town. The burgesses were received very graciously, and, in the result, the king granted a charter of foundation for a school which he designed for the benefit not only of Shrewsbury, but of the whole neighbouring county, and named "The Free Grammar School of Edward the Sixth, for the educating, teaching, and instructing of boys and youths in grammar." By way of endowment, he set apart the appropriated tithes of several prebendal livings which had belonged to the dissolved colleges before mentioned, and the building of the school was presently begun within the old town liberties of Shrewsbury, encompassed by the Severn.

Before the new school could be opened Edward died. It was in abeyance during the reign of Mary. Nor was it actually opened until the year 1562, eleven years after it had been founded, and four after Elizabeth had become queen. Now began its prosperity. Its first appointed Master was Thomas Ashton, a resident of the town, some time Fellow of

St. John's College, Cambridge, and a scholar of great accomplishments; added to which he seems to have been high in the favour of Queen Elizabeth. Within a few months after his assuming control of the school 290 scholars had entered it, a number which in his day was rarely exceeded by either of the three senior foundations of Winchester, Eton, and Westminster. "Oppidani," town boys, came in large numbers to be taught by Ashton; and "alieni," boys of the surrounding country, as well; among the latter the sons of such notable personages of their day as Edwin Sandys, Archbishop of York, and Sir Henry Sydney, Lord Deputy of Ireland and President of the Welsh Marches. The fame of Shrewsbury's first Head Master might well rest on the honour which belongs to him of having educated two such illustrious men in English history as Philip Sydney, well-named "the Scipio, Cicero, and Petrarch of his time," and Fulke Greville, Lord Brooke, whose simple epitaph proudly recites that he was "servant to Queen Elizabeth, councillor to King James, and friend to Sir Philip Sydney." But Ashton was tutor to a man even yet more famous in history than were either of these two noble kinsmen, albeit they were men whose memories will never be forgotten in the recitation of the eventful incidents of Elizabeth's reign. Ashton resigned his head-mastership at Shrewsbury to superintend in the capital the studies of the brave, clever, and generous, but ill-fated Robert Devereux, afterward Earl of Essex. Following his arrival in London,



SCHOOL TOWER.

Ashton besought the queen's favour in behalf of his old school, and to such good purpose that she at once very considerably increased the endowment made by her brother. So the Free Grammar School of Shrewsbury prospered in the very earliest stages of its history. "It is the best filled in all England," wrote Camden in the succeeding century, "being mainly indebted for its flourishing state to provision made by the excellent and worthy Thomas Ashton." The "total want" which, at one time,

had been experienced by the worthy burgesses of the town, was now well supplied. Their children, and the children of the gentry of the county of Salop and North Wales, and of many persons of the highest distinction in the kingdom besides, esteemed it a high privilege to attend the grammar school which the joint munificence of Edward and Elizabeth had created, and which had risen into so great prominence by the singularly able teaching and effective management of Ashton. During the brief period of his mastership the number of scholars received into the school amounted to no fewer than 875.

The regulations framed for the governance of Shrewsbury Grammar School—regulations, be it remarked, which remained in force down to the concluding years of the eighteenth century—afford an interesting insight into the school life and system of Queen Elizabeth's reign. Ashton had more to do than any one else with framing those regulations. First and foremost, both the Head and the Under Masters were to be graduates of the University, "well able to make a Latin verse, and learned in the Greek tongue." No scholar was to be admitted into the school before he could write his own name "with his own hand," and before he could read English perfectly, "and have his accidence without his book." A lord's son, on admission, was to pay 10s., a knight's son 6s. 8d., a son and heir-apparent to a gentleman 3s. 4d., and "for every other of their sons 2s. 6d." Boys coming from within the county of Salop were to pay only 1s., and "every burgess's son inhabiting within the town, or liberties thereof, or of the Abbey Foregate, if he be of ability, 4d." This regulation, which provided that the sons of burgesses of Shrewsbury should receive their education at the grammar school of the town at a nominal rate of payment, still continues in operation. The present foundationers of Shrewsbury School are elected exclusively from among applicants who can claim the privilege of being sons of burgesses of the town. The original statutes of the school decree that the boys are to be brought to read Tully, Cæsar, Sallust, and Livy; "also two little books of dialogues, drawn out of Tully's Offices and Ludovicus Vives, by Mr. Ashton;" Virgil, Ovid, Horace, and Terence, the Greek Grammar and Testament, and Isocrates, Demosthenes, and Xenophon. The scholars were enjoined to come to school in the morning, "from the Feast of the Purification to the Feast of All Saints, at six of the clock," and "from the Feast of All Saints until the Feast of the Purification, at seven of the clock." No candle was permitted to be used in school lest it might bring danger and peril. The going to dinner was to be at eleven, and the coming back from dinner at a quarter before one. School was to close at half-past four in winter, and at half-past five in summer. Thursday was the appointed day for play—a whole holiday, in fact, "and no day else but Thursday, unless it be at the earnest request and great entreaty of some man of honour or of great worship, credit, or authority." The school games were duly set forth as follows: "Item, the scholars' play shall be shooting in the long bow and chess play, and no other games unless it be running, wrestling, or leaping; and no game to be above a penny, or match above fourpence." In such manner was the school-time and play-time of the scholars of one of the most worthy of our great Public Schools apportioned in the reign of Queen Elizabeth.

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It has been stated in a previous paper that, in the eye of the law, the foundation boys of each of our great schools represent the school; in other words, that the "King's Scholars" of Eton represent Eton College as founded by King Henry VI, the "Collegers" of Winchester represent Winchester College as founded by William of Wykeham, the "Queen's Scholars" of Westminster represent Westminster School as established by Queen Elizabeth. In the

to pass that the number of scholars who held the statutable right to be educated at the school under Edward's charter at the mere nominal fee have become so greatly reduced that, had the school depended for its existence on the influx of "oppidani," or town boys, it must long since have ceased to be. The prestige of Shrewsbury School has been upheld, and its fame promoted, by the boys who, as "alieni," have sought admission to it from all parts of the



SHREWSBURY SCHOOL.

case of Shrewsbury School this order of things has been reversed, owing to the restriction imposed by Edward, that the principal benefits of his Free Grammar School should be reserved to the sons of the burgesses. Since his day the burgesses—that is to say, those inhabitants of the town of Shrewsbury who possess the legal qualification to be so named—have greatly declined in number, and each succeeding year they are becoming fewer and fewer. But a limited number of persons at the present day live within the old borough liberties of Shrewsbury; the town proper is mainly used for business purposes, the inhabitants residing principally on the outskirts. Hence it has been brought

kingdom. These for many years have monopolised the honour of supporting its claim to be ranked among the nine principal schools of England—a claim, be it mentioned, which hitherto has been admirably enforced by its great reputation as one of the first and best classical schools in the kingdom.

The school life and system of Shrewsbury School differ in no material respect from the school life and system of our other great schools. The boarders for the most part reside in one of two houses. The senior boys are taken into the School House, or Senior Hall, where the Head Master himself resides, the juniors living with the Second Master. For some time Shrewsbury laboured under great

disadvantage, owing to the very indifferent accommodation provided for its wardens; but this state of things has been to some extent remedied. Still the school by no means attracts the large number of scholars which its long-acquired reputation and standing ought to draw together. No doubt this arises in great measure from the keen competition introduced by the formation of such excellent modern schools as Marlborough and Cheltenham. The number of boys at present at Shrewsbury is less than one-third of the number being educated at each of the two schools we have mentioned. This would seem to suggest that the old-fashioned preference for a classical education is dying out, and that parents now desire to have their sons instructed principally in those subjects which are likely to prove of immediate practical utility in after-life. In short, that Latin and Greek are giving way to French and German and other modern languages, and that skill in mathematics and science is held to be of greater importance than a correct appreciation of the superior merits of the Latin and Greek poets. Recent legislation has effected a considerable change in the school instruction offered at Shrewsbury, which is now more in accordance with modern requirements. This being so, it is very much to be hoped that this excellent school may once more rise to the distinguished position which it held when Ashton, among its earlier Head Masters, and Kennedy, among its Head Masters of a later day, exercised such a powerful influence by their teaching.

There is one feature of the school system of Shrewsbury which merits attention. Discipline is maintained there by an admirable plan of rewards and punishments, indicated by merit-marks and penal-marks. One of the masters has the salaried office of "Master for Discipline." He keeps a book, with two pages for each name, in which are accurately recorded a boy's offences of omission and commission, his progress in studies, and conduct generally, by means of such marks. Merit-marks are awarded monthly. The greatest number of these which a boy may obtain is twelve, apportioned for various studies and good conduct. Four merit-marks purchase a half-holiday in the ensuing month; any number above this is rewarded—or perhaps it would be more correct to say, used to be rewarded, for we are not quite sure whether this particular custom still obtains in the school—by so-called "merit-money." Corporal punishment is absolutely in the hands of the Head Master, and is never resorted to except for grave breaches of school discipline and grossly immoral conduct. A common penal-mark, known in the school as a "C. P.," implies an imposition of fifty lines; an extra penal-mark, or "E. P.," involves detention in school after hours, and so on.

The monitorial system, which has been aptly termed the bone and sinew of our public-school education, is in vogue at Shrewsbury. From among the head boys of "the sixth form" a certain number are selected by the Head Master to act as "Præpostors." These are elected solely on the ground of literary merit, and are allowed certain privileges, which they prize very highly, one of which, to say the least, is as curious as it seems to be invidious. The general body of the scholars of Shrewsbury wear the college cap, which from time immemorial has been generally held to be the distinguishing badge of a monitor of some superior academic society—a

badge, in fact, which most youths consider it an honour to be permitted to wear. The præpostor of Shrewsbury School discards the college cap on his election to office, and henceforth is privileged to appear out-of-doors in the unsightly and vastly more uncomfortable hat of modern society. Besides this distinction, he carries a stick as an emblem of office, is allowed to be seen "out of bounds"—that is to say, outside of the sacred zone within which other Shrewsbury scholars are alone permitted to walk or play, and goes home for the holidays a day or so earlier than other boys. The præpostors are, besides, allowed collectively to exact certain services for the "head room"—the room in which they ordinarily live—from their junior fellows. These younger boys—or in school parlance, "fags"—are "put on" by rotation, being selected from among the scholars below the sixth form. They act for a week, and are then replaced by others. The Head Master of Shrewsbury looks upon his præpostors as a kind of senate, or representatives of the school in relation to himself and to discipline. They engage, by signature, on the part of the school, to do and to prevent many things. If an evil is to be stopped, or an offender given up, or a new rule made, the Head Master addresses his præpostors on the subject. If a favour is asked for the school, or a remonstrance is wished respectfully to be made, the præpostors are the medium for approaching the principal school authority. They are, in fact, the elected representatives of the Head Master, and of the scholars as well; and in this respect the monitorial system of Shrewsbury differs from the monitorial system of most other public schools. We are assured that it works well in practice, and this is the safest test of its efficacy; but we doubt whether at a larger school than Shrewsbury—a school, for instance, of five or six hundred boys—the many would surrender all their rights to the few. Another custom exists at Shrewsbury which has been long since abolished at other schools, and, in our opinion, very properly. On certain days all boys are required to attend and join in one of the school games, which in this instance happens to be football. Shrewsbury can boast of a good boating club, cricket club, and football club; but it has not within recent years come very prominently forward in the Inter-Public School matches.

Its School Library, which seems to have originated in that of the Benedictines of the Abbey, is a famous one, and is certainly, of its kind, one of the most valuable and interesting in the kingdom. It includes the books of one of the worthiest of Shrewsbury's worthies, Dr. John Taylor, the barber's son—"Demosthenes Taylor," as he was called—of whom Johnson declared to Boswell that "he was the most silent man, the merest statue of a man," that he had ever seen. Johnson had tried his best at a dinner-party to draw out the learned little man in a vigorous discussion, and had failed. Demosthenes Taylor uttered one word only, and that happened to be in correction of a mistake made by the great lexicographer himself, who was about the last man in the world to forgive anything of the kind. Dr. Taylor not only bequeathed his extensive library to Shrewsbury School, but his considerable fortune as well. One of the present exhibitions to the University attached to Shrewsbury School was founded by him.

Among other prominent men who, in days past, were beholden to the Shrewsbury Free Grammar

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School of Edward VI for their early education, may be mentioned James Harrington, the author of "Oceana," who, though a speculative republican, was the faithful friend of Charles I, and attended him to the scaffold. A less worthy scholar was Jeffries, the infamous chancellor, who seems to have migrated from Shrewsbury to become a scholar of Westminster. In later years many distinguished men have passed to the University from Shrewsbury, men of whom the school is justly proud, and whose

subsequent distinguished careers have amply testified to the excellence of the early education which she gave them. We may enumerate among such men Dr. Thompson, the present Archbishop of York. Mr. Charles Darwin, the learned and earnest investigator in the field of science, and Mr. Gathorne Hardy, the accomplished scholar and statesman. Long may the Free Grammar School of Edward VI at Shrewsbury continue thus worthily to uphold her honourable position among the sacred nine schools of England.

WEATHER CHARTS AND STORM WARNINGS.

II.

WE have now to speak of the means employed to afford us the valuable information contained in the Daily Weather Reports issued by the Meteorological Department.

The Meteorological Committee consists of Fellows of the Royal Society, who give their valuable labours gratuitously, but a grant of £10,000 has been voted annually since 1866 to defray the costs of working the department. The committee meet once a fortnight, or oftener, but it is probable that the future conduct of the important duties of the office will be shortly placed under a paid council in lieu of the present committee.

Some idea may be formed of the labours of the department when it is known that the whole surface of the globe, both sea and land, has been marked out into squares of ten degrees of latitude and longitude, and that records are kept of all observations made in each square, and entered upon the world's chart. Commanders and officers of vessels are supplied with the best instruments, verified at Kew, which, however, are only lent out for the voyage, and returned with the various squares in the chart filled in according to observations made.

In examining the square of 10° which comprises the greater part of the British Isles, we find that the total number of recorded observations for each month averages considerably over fifteen hundred, or nearly twenty thousand for the whole twelve months. In some squares in the Atlantic Ocean, and in other parts of the sea much frequented by vessels, more than 1,000 observations are recorded for each separate month, whilst in the Ceylon and Madras squares there are nearly 500 observations for every month in the year: in the aggregate, but not for each year.

As these observations comprise direction and force of the wind, amount of rain, and various other phenomena, and are all tabulated in their proper place for each separate square, some idea is obtained of the kind of wind and weather to be expected at every season of the year over a very large portion of the world's surface, particularly at sea; and as these observations are daily increasing and becoming more reliable, they are of the greatest assistance to the navigator when pursuing his apparently trackless path across the wide ocean. By referring to the copy of these weather charts in his cabin the skilful seaman is able to select for himself the track where he may be almost certain to find the most favourable winds, and thus the great labours of all former observers have been preserved for his guidance and benefit.

No other Government has undertaken observations on this scale excepting that of the Netherlands, and their charts are almost entirely for the route between Holland and the East Indies. The Pacific Ocean has the fewest recorded observations of any of the great waterways of the world, and for many years a great many of the squares that comprise that ocean will not be largely filled in. The Atlantic Ocean has been mapped out with the greatest care, the observations over several of its squares extending to many thousands.

The Meteorological Office in London is in daily telegraphic communication with fifty-one stations, including the whole of the British Islands, the Continent of Europe, from Corunna, lat. 43°, to Christiansund, lat. 63°, also four stations in the Baltic, and one in the Mediterranean.

The daily observations are taken at 8 a.m. Greenwich time, and most of the telegrams arrive in London by 9 a.m., when the Intelligence Department of the Post Office extracts from them the portions required for its wind and weather reports, and transmits the originals by private wire to the Meteorological Office. There it takes about two hours to reduce the various data and to draw up the reports, which are presented to the newspapers in time for publication in their afternoon editions.

Daily charts are drawn for the "Times" twice, viz., 8 a.m. and 6 p.m., the former are necessarily the most complete, as they include observations from fifty-one stations, and are ready for the public by the afternoon. An arrangement has, however, been made with the "Times" newspaper by which the Meteorological Office is kept open daily until 9 p.m., and also on Sunday evenings from 6 till 9 p.m., and reports are received from a certain number of stations dated 6 p.m., so as to admit of the preparation of a special chart, which is published daily in the morning edition of that journal. The extra expense, which is about £500 per annum, is borne by the proprietors of the "Times," and the fishermen and mariners of our coasts have frequently been indebted to them for timely warning given of an approaching storm telegraphed on Sunday for the "Times," and which would otherwise have burst upon them unawares. Warnings of approaching bad weather are also frequently sent out in the evening, owing to the extra observations forwarded for the use of the "Times," which would otherwise not have been sent away till about eleven o'clock the following morning, and would then, perhaps, have been too late.

The science of "weather telegraphy," or fore-

warning of storms, may be said to be still in its infancy, though great progress has been made since the days when good old Admiral Fitzroy devoted his whole energy to the solution of the great weather problem.

Most of our destructive storms come upon us from the Atlantic, and it may be obvious to the most casual observer that on that dangerous side we are singularly deficient in the power of protecting ourselves. True, we have signal stations on the west coast of Ireland and on the outermost points of Scotland, and by the fall of the barometer at these places we often receive timely warnings, which we transmit to our east coasts and to Northern Europe, and that is why the English ports of the North Sea, and also Hamburg, possess advantages over the more westerly districts of these islands.

What we really require, however, to render our warnings complete, are two or three signal-stations in the Atlantic Ocean, from 500 to 1,000 miles away from these shores, but these we are not very likely to obtain. Supposing that such fixed stations, connected by telegraphic cable with London, were practicable, it would be next to impossible for any great Atlantic storm to burst upon us without our being previously forewarned.

It is true that, with praiseworthy generosity, the proprietors of the "New York Herald" frequently send us information that a great storm has just passed over New York, and may be expected in England on such a day. Between us and New York there are nearly 3,000 miles of ocean, and it is more than probable that a great many of the gales which leave New York, apparently bound for England, never arrive here at all, or if they do they have blown themselves comparatively out, and are no longer harmful in their effects. We shall give some statistics of these warnings further on.

Not having any outlying Atlantic stations from which to obtain information, we are obliged to do the best we can with our existing appliances, and the official Blue-books published by the Government enable us to see how far we have succeeded in affording to our mariners timely warning of approaching gales.

No very serious storm is likely to approach us from the Atlantic without some premonitory fall in the barometer, which is duly telegraphed to the head office in London, and serves as the basis for warnings issued. The following list will show with what result such warnings were given:—

1870	46.7	subsequent gales	21.7	strong winds	68.4	total percentage of successful warnings.
1871	46	do.	17.7	do.	63.7	do.
1872	61	do.	19.5	do.	80.5	do.
1873	45.2	do.	34.0	do.	79.2	do.
1874	45.4	do.	32.3	do.	78.2	do.
1875	41.1	do.	35.1	do.	76.2	do.
1876	61.1	do.	21.5	do.	82.6	do.

The above table shows what percentage of warnings issued were justified by subsequent bad weather, and it will be noticed that there is a marked improvement in the year 1876, which was partly owing to the extra observations for which, as we have already seen, the country is indebted to the public spirit and generosity of the proprietors of the "Times."

The warnings issued to the ports must be well known to most of our visitors to the seaside, but for the benefit of our readers we now reproduce them in the following diagram:—

DAY SIGNALS.

Drum over south cone. Drum over north cone

South cone. North cone.



Gale probably from southward.



Gale probably from northward.

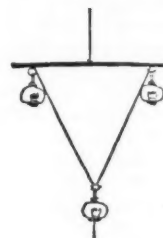
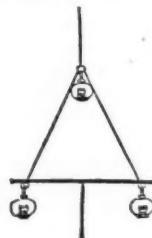


Probable heavy gale from southward.



Probable heavy gale from northward.

Night signals are lights in triangles. If the point of the triangle hang downward, it marks gale from southward; if point project upward, it marks gale from northward.



Mr. Scott now tells us that the information which we are able to obtain from the daily weather reports may generally be turned to very good service if rightly used, and he gives us the case of a resident in or near London, and shows how he may deal with the weather chart just issued from the press. In cases where the report is twenty-four hours old, its use is, of course, much less.

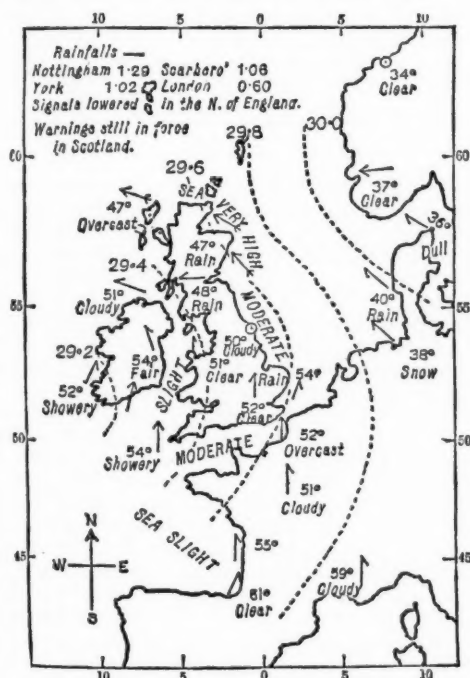
"As most of our disturbances advance from the westward, and take some time in travelling from the west of Ireland, we can learn, by studying the chart for the previous day, what conditions were then existing at the western stations, and, consequently, we can gain some idea of what is likely to be the result of the changes which we notice by our own local observations, instrumental and otherwise.

"If, for instance, the barometer at our own station is high and steady, with dry weather and light winds, either in winter or summer, we may form a general notion that the type of weather is anti-cyclonic, and as this type is peculiarly permanent, we may be sure that any change will give at least several hours' notice of its coming, by alterations in instrumental readings occurring over some part of the district covered by the reports. The study of the charts in this case is the more important, because frequently at such times cirrus or mare's tail clouds appear in the sky, which are usually the precursors of coming wind, and change of wind in such a case means change of weather. The charts then will show whether or not this wind, existing at a great elevation, had made its way down to the earth's surface at any place on the previous day within the district just referred to."

Mr. Scott, therefore, considers that "though these charts are useful helps to the local observer, and will be found so by those who study them regularly, combining with study careful and systematic observations of their own instruments and of local weather, yet for the purpose of judging whether a particular afternoon will be wet or fine—which is all that the public generally care to know about weather—it is obvious that charts which are in many cases necessarily more than twenty-four hours old cannot be of much service." On the whole, therefore, he concludes "that our insular and exposed position precludes us, in the present state of our knowledge, from the possibility of issuing forecasts of future weather sufficiently trustworthy to be worth publication, excepting occasionally, and then principally for the south-east of England." But the fact remains that 82 per cent. of the storm warnings issued to 130 stations were justified by subsequent bad weather.

Much has yet to be learned of the laws which govern the weather; and every observer who keeps a record of careful registration may be able to render help to the future student of meteorology, besides deriving immense benefit himself from the daily observations which he notes down in his local charts.

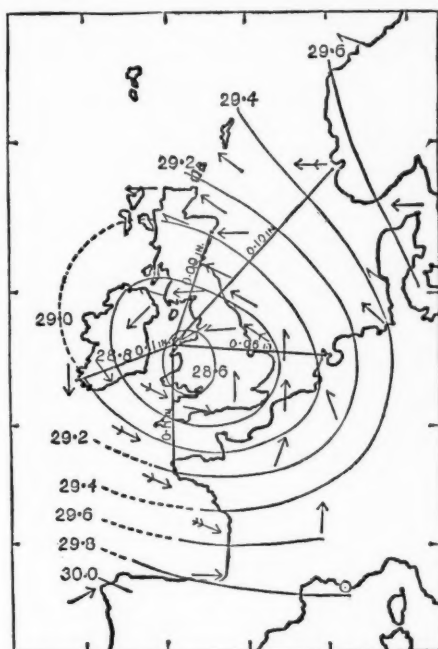
By kind permission of Mr. Scott, we are enabled to reproduce four admirable charts illustrative of different states of the weather over these islands.



NO. 1. BAD WEATHER CHART. October 21st, 1875.

No. 1 is a chart for 21st October, 1875, showing the approach of bad weather from the Atlantic. The large figures at end of the isobars show the range of the barometer, which varies from 29.2 at Valencia in Ireland, to 30 inches near the coast of Norway. The small figures denote the temperature, which is rather high for the time of year. The direction of the wind from south-west to south in the south, whilst it is south-east and east in the north, shows the cyclonic nature of the approaching storm.

No. 2 shows a true cyclone lying over these islands, having its central depression, or lowest isobar of 28.6 inches, over Wales. The straight lines drawn across the circles give the atmospheric gradients, varying from 0.7 to 0.13 of an inch in the mercury in a base line of sixty miles; and this we have already seen is a certain proof of a very strong gale of wind.



NO. 2. CYCLONE CHART. November 29th, 1874.

Let us quote Mr. Scott's description of the approach and passage of this cyclonic storm, which would be more intelligible if we had space to reproduce all the charts illustrating this storm.

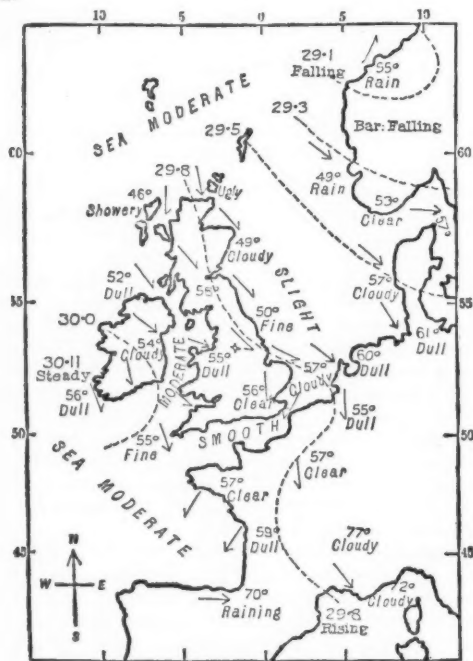
CYCLONE OF NOVEMBER 29th, 1874.—"The earliest unmistakable signs of its approach were at 8 a.m., November 28th, when a rapid fall of the barometer at Valencia, on the south-west coast of Ireland, with a southerly wind, and the course of the isobar of 29.3 inches, show that there must be an area of low barometric pressure at sea outside the coast. Over the greater part of England the direction of the wind is south-easterly, a very general phenomenon on the approach of a serious storm, owing, apparently, to the indraught of air towards the region of diminished pressure.

"The next chart for 6 p.m. on the same day shows the central isobar of 29 inches—a very low barometer—over the south of Ireland, while the south-east winds over England have veered to south-west, and the isobars, previously running nearly north and south, show a marked curvature. Even in Norway pressure has given way, the isobar of 29.8 inches having taken the place of 29.9 inches. During the night the storm made rapid progress, and at 8 a.m. on the 29th November, or twenty-four hours after the first notice from Valencia, we find the centre of the storm lying over Holyhead, as shown in our Chart No. 2, and the influence of the depression extending over the whole of western Europe. At 6 p.m. the centre of the storm passed over New-

castle, the southerly winds disappear entirely, and the gales are from east in Scotland, and from west in England."

This description will serve to show the general motion of cyclones—in this instance not a very rapidly moving one—whilst the easterly gales in Scotland, blowing at the same moment that westerly gales were sweeping over the middle and south of England, show that the storm was a circular one, the opposite direction of the winds being caused by their rotation about a centre of very low atmospheric pressure.

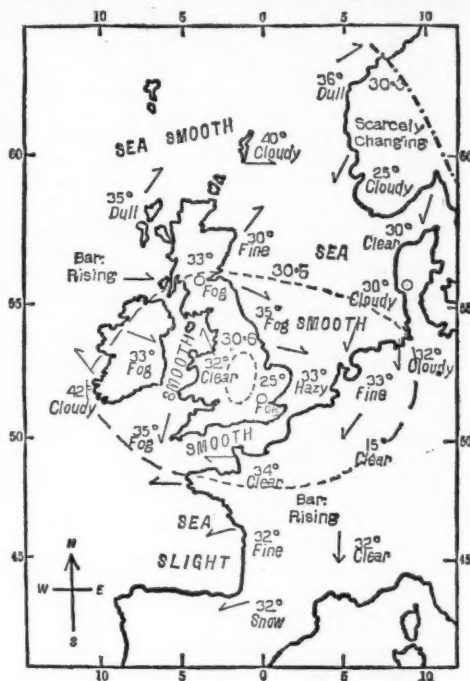
It will also be clear to the most casual observer that when the first approach of the storm was telegraphed from Valencia, there was ample time to warn all our English and Scotch coasts, as well as the ports of Europe in the North Sea. When, however, a cyclone advances across the country at a rate of from fifty to seventy miles an hour, it may easily be seen that it may burst upon the ports of the Irish Channel and the south-west of England before timely warning can be extended, although the ports of our east coast, and those of Holland, Hamburg, etc., may be forewarned by telegraphic notices. This, in fact, occurs not very unfrequently, and instances are given in which Hamburg has been warned of furious cyclones that have come upon us almost unawares, and foreign vessels have thus been saved from a destruction which has overtaken some of our own ships in the English Channel and North Sea.



NO. 3. FINE WEATHER CHART. August 24th, 1876.

No. 3 is a more favourable chart, for we see the bad weather—marked by the low barometer—passing away from us toward the Norwegian coasts, whilst a wave of very high atmospheric pressure is steadily advancing towards our islands from the Atlantic. This weather occurred on the 24th August, 1876, and in this case our prevailing winds were from some point of north.

No. 4 is an anti-cyclone, wherein the isobars are in circles showing the highest pressure in the centre. This kind of weather is comparatively stationary, the barometric pressure remaining nearly the same for



NO. 4. ANTI-CYCLONE CHART. January 11th, 1878.

two or three days together, and when they occur in summer they produce our hottest weather. The one represented occurred 11th January, 1878, and was a winter anti-cyclone, with a low temperature and a good deal of fog. The central isobar is 30.6.

Charts similar to these are published in the "Times" and some other papers every day, and it may interest our readers to hear how these instructive little maps are produced with the speed and correctness essential for newspaper service.

The Patent Type Founding Company, to whom we are indebted for these charts, have adopted a cheap and rapid method of producing metal moulds for the printers' use, which we may profitably pause a moment to examine. Maps of the British Islands and neighbouring coasts having been prepared in plaster-casts, permanent metallic moulds of the required size have been made. When Mr. Scott sends in his rough diagram marked with the daily recorded observations, with isobars, temperature, remarks, etc., a plaster-cast, already impressed with the map, and now quite hard, is placed under a small metal cutter connected with a steam engine, and capable of being made to rotate, in an upright position, about 4,000 times in a minute. This rotating spindle is connected with the arm of a pentagraph, which reduces the drawing or writing to one-fourth its original size. Mr. Scott's rough chart being fixed under the pencil of the pentagraph, the spindle is set rotating, and the engraver commences to draw the pencil over the lines, figures, and words of the chart. As he does this he presses a pedal with his foot, so that the spinning cutter touches the plaster-cast, in which it instantaneously

and beautifully cuts out the letter or figure at the reduced size required for printing. This operation can be very rapidly performed by a practised hand, and in a marvellously short time the weather chart for the day is thus engraved in the cast. It is then sent to the foundry, the metal is poured in, and in an hour or so the block is ready for any of the newspapers requiring to print from it. In this way those excellent maps of the war, which have been of so much use and interest to us all, the chart of Mr. Stanley's journey across Africa, and many other maps and diagrams, have been prepared for the press with a speed and precision quite marvellous to witness, and at a very moderate cost.

With regard to the American storms of which we are now forewarned by telegraph from New York, a few words must be said.

In an article in the "Nautical Magazine" for March, 1878, Mr. Scott discusses this question in full. He tells us that for about four years—from 1867 to 1871—the Anglo-American Telegraph Company generously supplied the Meteorological Office in London with gratuitous telegraphic despatches from Newfoundland, announcing the departure of storms from the American coast. The experience obtained during those four years was not, however, sufficiently encouraging to induce the English Government to continue the warnings at their own cost.

In February, 1877, the proprietor of the "New York Herald," Mr. J. G. Bennett, commenced sending to this country those gratuitous storm warnings which from time to time we see announced in the daily press. Out of forty storms thus announced by telegraph, Mr. Scott tells us—

7 or 17 per cent. may be considered a full success.
16 or 40 " " " partial success.
17 or 43 " " " total failure.

And with these results he thinks that, so far, the attempt to foretell weather by means of Atlantic cables has not been very successful. The fact that a gale occurs on the day predicted in no way proves that this was the same gale reported to have left New York, as so many storms are found to have their origin in the Atlantic.

Mr. F. Tilney Stonex, t.c.d., has kindly confirmed this view from his observations in Dublin, and he particularly notes a great storm predicted by the Americans "to strike British, Norwegian, and French coasts on 10th October, 1877." On that date, he says, "a storm appeared, but on the 13th came another one, unannounced, and on the 14th and 15th a storm of unusual and memorable violence burst upon us. Three distinct storms in four days! Clearly no one can say which of the three was the one advised from New York."

This study of American forecasts is, however, still in its infancy. Meanwhile we should watch carefully the results of each separate prediction.

C. H. ALLEN, F.R.G.S.

AN ARITHMETICAL PROBLEM.

HERR MEYER, who contributed the paper on the Knight's Tour of the Chess Board, which appeared in the "Leisure Hour" a few years ago (1873, p. 813), has since produced an arithmetical arrangement of the sixty-four numbers of the squares, which has very remarkable results. We give this problem and its solution in his own words:—

It occurred to me that it might be possible so to arrange the 64 numbers of the Tour as to produce the sum of 260 in each of the 8 horizontal, each of the 8 vertical, and each of the 2 [long] diagonal lines. I was the more induced to try this as some tours nearly reach this desired result; for there are two known to me which fail of such symmetry only by 4 units in each diagonal—that is, one diagonal sums 256, the other 264. Let me, for the sake of young students and mathematicians, quote them here.

1. BY MAJ. C. F. DE JÆNISCH.

58	43	56	7	46	21	10	19
55	6	59	44	9	13	47	22
42	57	8	53	24	45	20	11
5	54	41	60	17	12	23	48
40	31	4	25	52	33	62	13
3	28	37	32	61	16	49	34
30	39	26	1	36	51	14	63
27	2	29	38	15	64	35	50

2. AUTHOR UNKNOWN.

10	35	48	23	38	29	50	27
47	22	11	36	49	26	39	30
34	9	24	45	32	37	23	51
21	46	33	12	25	52	31	40
8	63	20	57	44	1	14	53
19	60	5	64	13	56	41	2
62	7	58	17	4	43	54	15
59	18	61	6	55	16	3	42

I tried for several months to realise my idea, but in vain. At length I succeeded in arranging the 64 numbers so as to produce the sum of 260 in each of the lines, thus:—

18	63	4	61	6	59	8	41
49	32	51	14	53	12	39	10
2	47	36	45	22	27	24	57
33	16	35	46	21	28	55	26
31	50	29	20	43	38	9	40
64	17	30	19	44	37	42	7
15	34	13	52	11	54	25	56
48	1	62	3	60	5	58	23

This arrangement has also other remarkable qualities. Each group of 8 numbers standing in a

circle around the centre of the above diagram amounts to 260. There are six such circles; the smallest consists of the numbers 22, 28, 38, 44, 19, 29, 35, and 45; the largest of 8, 10, 56, 58, 1, 15, 49, and 63. The sum of the 4 centre numbers, plus the 4 corner numbers, is 260; and the diagonal cross of 8 numbers in the middle of the board sums 260. An enthusiast will discover other qualities.

The middle of the diagram might also be arranged thus:—

35	46	22	27
36	45	21	28
29	20	44	37
30	19	43	38

Several other arrangements of figures—"magic squares" as they have been called—have since appeared in the "English Mechanic."*

* See vol. xxiii. pp. 259, 411, query 25,897, and other intermediate points.

Varieties.

PROVIDENT DISPENSARIES.—The benefits of these co-operative institutions are beginning to be recognised in the provinces as well as in London. The friendly societies of Scarborough are united in starting a Friendly Society's Medical Aid Association, having for its object the appointment of a doctor and dispenser, whose sole attention shall be given to the members. They have purchased a house for a dispensary, and it will be opened at the beginning of next year.

CHINAMANIA.—Some time ago the chief representative of the Wedgwood family gave public notice that a vast quantity of spurious "Wedgwood ware" was in the market. Such warnings seem to have little effect upon the enthusiasts who collect objects of art. The rage for blue and white China is the most recent folly of the kind. Rather, it is a revival of an old fancy, for it was said of Horace Walpole and his collection at Strawberry Hill:—

"China's the passion of his soul;
A cup, a plate, a dish, a bowl
Can kindle wishes in his breast,
Inflame with joy, or break his rest."

At a sale not long ago £1,330 was the sum paid for a pair of blue and white pots, of the form commonly known as "Ginger Jars." Some of this old China is, no doubt, beautiful, both in colour and form, but much of it is neither beautiful nor old. The "dealers" manage all that, and the buyers believe what is the talk of the day. At the same time there is an element of intrinsic value in genuine "old blue." According to M. Stanislas Julien, the translator of the Chinese History of the Imperial Factory of King-te-chin, porcelain was commonly made so far back as 185 B.C., and therefore 1,600 years before it was known to the Western nations. The fine blue of that ancient porcelain is thought to be obtained by the use of lapis lazuli, and the art of the process reached perfection about the end of the 17th century and early in the 18th, after that being lost and remaining inferior in quality till more recently efforts have been made to recover it, but not with complete success. Let buyers remember, however, that ancient "marks" can be forged as well as ancient China imitated.

HURLINGHAM PIGEON-MATCHES.—To shoot pigeons let out of a trap is low enough amusement in itself, but even in this there are lower depths. It was discovered some time ago that many of the birds were blind on one side, by having had a needle thrust into the eye, thus giving unfair advantage to the owner of the gun, who was aware of the foul trick, and knew the direction the bird would take. A resident at Fulham assures us that he had seen birds in this condition. This was stopped promptly, but the whole affair of the Hurlingham Gun Club is a disgrace to our time. At Nottingham, four "roughs" were

lately fined for shooting at a barn fowl, the leg of which was tied to a peg for the match. If this punishment was according to law, why should the Hurlingham roughs be allowed to continue their brutal sport? The dove is as worthy of protection as a barn-door fowl. It is an emblem of love and peace. Even in Mohammedan countries it is respected. It is only in Christian England that doves are used to show how well betting men can shoot. Many persons of aristocratic name frequent Hurlingham, but not the less is it a place of shame, where no man of honour or woman of modesty should be seen.

ARNOLD'S SERMONS.—Arnold loved boys—loved their souls; was anxious to instil into their minds the noblest principles, and to make them, under God, faithful and devoted servants of their Master in heaven. No wonder that, so loving them, he was wise to win them to Christ. The sermons are what he intended them to be—"practical addresses to the congregation before him." They were written with a wonderful rapidity; composed, his daughter, W. E. Forster, tells us, on a Sunday afternoon in the couple of hours before he went into chapel; "yet," she adds, "I cannot but believe that they will still be read with interest, and the freshness and force of them will be found still unexhausted." Mrs. Forster is quite right, as any one who takes up the volumes may see, for he will find in them much that is "profitable for doctrine, for reproof, for correction, for instruction in righteousness." There are six volumes, but each may be had separately, and no better gift could be given to a boy than the volumes which contain the sermons preached in the chapel of Rugby School.—*Canon Bell.*

WORKS OF FICTION WITHOUT IMAGINATION.—Works of fiction were frequently without any imagination at all. Many was the three-volume novel they could read from beginning to end, and their mind would not be lit up by one spark of imagination. What did some of these writers do? They photographed daily life, and did not introduce their readers to anything beyond it. They described characters precisely like the people whom they saw every day—the very clothes which the people whom they met every day wore, the very words which might be addressed to themselves, the very smiles which might be smiled at them, the very love which they hoped would be made either to themselves or to their sisters, and then at the end they thought they had written a novel. That might be fiction, but it was not imagination, and why? They had not the power to form ideal pictures, or to represent to themselves or to others absent things. It was only the present they could deal with. Then, with regard to the books of children younger than those pupils present, he might state that he preferred stories which did not simply deal with daily life. He preferred "Alice in Wonderland" as a book for children to those little stories of the lives of Tommies and Freddie's, which were but little photographs of the lives of the Tommies and Freddie's who read the books. He liked to see boys amuse themselves in tales of adventure, with stories of gallant deeds and noble men, with stories of the sea, of wars, of scenes, in fact, different from those in which they lived.—*Mr. Goschen, M.P.*

CHARITY ORGANISATION SOCIETY.—The committee, in its last report, in appealing for liberal pecuniary support from the public, thus briefly describes the objects of the association: "To make the administration of charity more efficient; to provide against all reasonable pretexts for the bestowal of indiscriminate relief; to promote co-operation where now the energy and self-sacrifice of the charitable are wasted by isolated, and sometimes misdirected, effort; to enlist the service and sympathies of large numbers in the work of charity; and to learn, by the careful investigations of special committees, and by the practical experience of local agencies, how that charity can be made most productive of good to the poor."

VACCINATION.—The recent epidemic, and the continued prevalence of smallpox in London and other places, may have shaken the faith of many in the efficacy of vaccination. But this has been demonstrated by statistics and by history over and over again. The truth is that vaccination is very inefficiently carried out, in spite of medical knowledge and of public law. One of the medical officers of a large metropolitan parish states that in it there is only one vaccinating station, a mile distant from many parts of the parish; that the public vaccinator is not allowed to vaccinate elsewhere than at the station, except voluntarily to revaccinate persons above twelve, when a fee of one shilling is bestowed if the operation is successful. The Local Government Board does not even supply lymph for revaccination. This is only one illustration of the ineffective measures adopted for checking the re-establishment of smallpox as a permanent and fatal disease.

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